

## **Appendix E - Compliance With The 404(B)(1) Guidelines**

### **1.0 INTRODUCTION**

This appendix evaluates compliance with the section 404(b)(1) Guidelines (40 CFR Part 230). The goal of the Guidelines is “*to restore and maintain the chemical, physical, and biological integrity of waters of the United States through the control of discharges of dredged or fill material.*” The regulations set forth in 40 CFR Part 230 are the substantive criteria issued by the Environmental Protection Agency used in evaluating discharges of dredged or fill material into waters of the United States (waters of the U.S.). The section 404(b)(1) Guidelines provide regulations outlining measures to avoid, minimize, and compensate for impacts. For any permit to be issued under section 404, the proposed action must address all relevant portions of the Guidelines.

The Guidelines apply solely to U.S. Army Corps of Engineers (Corps) operating procedures and are not applicable to the California Department of Fish and Game (Department) regulations. The Corps is required to comply with the section 404(b)(1) Guidelines for any discharge of dredged or fill material into waters of the U.S. The Guidelines apply to all actions related to discharge of fill material into waters of the U.S. ranging from individual actions with small impacts to the aquatic environment to large actions such as a SAMP.

### **1.1 PROPOSED ACTIVITIES**

The San Diego Creek Watershed SAMP consists of implementing an Analytical Framework for watershed-based characterization of aquatic resources, developing permitting processes and a mitigation framework, a Strategic Mitigation Plan, and a Mitigation Coordination Program. The SAMP Analytical Framework represents the incorporation of an impact avoidance and minimization plan to promote the avoidance and minimization of impacts to sensitive aquatic resources as required by the 404(b)(1) Guidelines, at the watershed scale. Specifically, the Corps and the Department targeted the aquatic resource integrity areas as the foundation of the impact avoidance and minimization plan. The remaining SAMP components can be viewed as permitting elements and mitigation elements.

The SAMP permitting elements consist of issuance of a regional general permit (RGP) for maintenance activities and establishment of letter of permission (LOP) procedures after revocation of select nationwide general permits (NWPs). The issuance of a RGP would cover maintenance activities in the Watershed that temporarily impact no more than 0.5 acre of waters of the U.S., of which only 0.1 acres may be vegetated with native riparian and/or wetland vegetation, and occur in low value aquatic resource areas (i.e., outside of the aquatic resource integrity areas).

Implementation of the LOP procedures depends on the type of activity and whether the proposed activity is located inside or outside of aquatic resource integrity areas. Outside of aquatic resource integrity areas, the ecologic condition of the aquatic resources consists of low hydrologic, water quality, and habitat integrity. For the LOP procedures outside of the aquatic resource integrity areas, all activities could be authorized with no acreage threshold, provided the activity does not substantially modify a compensatory mitigation site or convert a major waterway to a hard-bottom or concrete-lined channel, which would require a standard individual permit (SIP). For the LOP procedures inside aquatic resource integrity areas, permanent impacts up to 0.1 acre of waters of the U.S. would be authorized. For impacts greater than 0.1 acres of waters of the U.S., an SIP would be required.

Implementation of mitigation elements are related to the permitting elements in that the mitigation framework is part of the SAMP permitting framework and the Corps authority over mitigation stems from its regulatory authority. A major benefit of the SAMP is the Analytical Framework, Strategic Mitigation Plan, and Mitigation Coordination Program allow the Corps to view avoidance, minimization, and compensatory mitigation on more expansive spatial and temporal scales than available by the conventional permitting process. Yet, future restoration activities in the Watershed may be the result of either a Corps permit's mitigation requirements, either through the SAMP alternate permitting procedures (LOP procedures or RGP) or through an SIP, for impacts to waters of the U.S., or implemented as part of ongoing Watershed restoration efforts, which may or may not necessitate a separate permit. Furthermore, compensatory mitigation site decisions would be made in the context of the landscape with emphasis on promoting connectivity and restoring areas where the ecological benefits of restoration are high in relationship to the monetary costs, as specified in the Corps restoration plan (Smith, 2004) and SAMP Strategic Mitigation Plan.

## **1.2 GENERAL APPROACHES TOWARDS COMPLIANCE WITH THE SECTION 404(B)(1) GUIDELINES**

The SAMP is a plan rather than a separate permit action and the evaluation of the SAMP in the context of the section 404(b)(1) Guidelines differs from a stand-alone permit action. Not all elements of the section 404(b)(1) Guidelines would be evaluated fully for the SAMP; rather, the emphasis would be on the evaluation of the SAMP as a program that would help future individual actions achieve fuller compliance. Compliance of the SAMP permitting elements with the Guidelines depends on type of action proposed.

For the action of issuing a RGP, consideration of alternatives does not apply (40 CFR 230.7(b)(1)) and compliance relies on considerations of the prohibitions listed in 40 CFR 230.10(b) and findings of significant degradation outlined in 40 CFR 230.10(c). Other requirements of the Guidelines as they apply to the issuance of a RGP, include an explanation

and documentation of why the activities covered by the RGP are similar in nature and have minimal impacts individually and cumulatively (40 CFR 230.7). The latter requirement would be partially satisfied by estimating the number of times the individual discharge activity would be regulated under a RGP.

For the establishment of LOP procedures, the compliance with the section 404(b)(1) Guidelines would be performed with the evaluation of each subsequent action, i.e., issuance of an LOP. As stand-alone permit actions, issuance of the LOPs would have separate evaluations. The SAMP does not authorize any actions proposed to be covered by LOPs, but establishes procedures that would allow issuance of LOPs, provided certain conditions are met. Future evaluation of LOPs would be aided by the program level evaluation of actions that could be authorized in the context of the Analytical Framework of the SAMP. Routine activities outside of aquatic resource integrity areas generally would impact aquatic resources with low ecological integrity, necessitating a different type of analysis and documentation reflective of the adaptability provisions provided by the Guidelines (40 CFR 230.6) and expounded within the Regulatory Guidance Letter 93-02.

For the mitigation elements, a separate determination of compliance with the section 404(b)(1) Guidelines typically would not occur. Although the SAMP establishes a mitigation framework with policies for the Watershed, the mitigation is only a requirement of a separate permit action. Thus, the compliance determinations would be made in the context of the permit action with the mitigation element being a condition of the authorization that would further minimize and compensate for impacts. If the action involves restoration not required as mitigation and requires a Corps authorization, then a separate determination would be made during the permit review process. In any event, the determination of compliance would be made in the context of the proposed rule for compensatory mitigation (40 CFR 230.91 to 230.99) published in the March 28, 2006 Federal Register on a program level and an individual project level.

## **2.0 SECTION 404(B)(1) GUIDELINES APPLIED TO A PROGRAMMATIC CONTEXT (40 CFR PART 230)**

Compliance with the Guidelines is outlined in 40 CFR Part 230 subpart B, and section 230.12 requires specific findings that a project complies with the Guidelines. Compliance with the Guidelines relies on appropriate restrictions of the discharge of dredged or fill material in waters of the U.S. First, the approved discharge of dredged or fill material must demonstrate the absence of other practicable alternatives with less adverse effects on the aquatic ecosystem, so long as such an alternative has no other significant adverse environmental consequence (40 CFR 230.10(a)). Second, the approved discharge of dredged or fill material must not be contrary to restrictions to protect the aquatic ecosystem or lead to significant degradation (40 CFR 230.10(b) or (c)). Third, the approved discharge of dredged or fill material must include all appropriate and practicable steps to minimize impacts.

Determination of compliance is clarified in other sections of the Guidelines. These determinations rely heavily on the factual determinations (40 CFR 230.11) based on subparts C-F with appropriate evaluation and testing of the discharged material in accordance with Subpart G. Based on the factual determinations, the Corps would make findings of compliance, specifying any minimization measures outlined in Subpart H needed to achieve compliance. In addition, the Corps and the EPA published proposed regulations for compensatory mitigation (40 CFR 230.91 to 230.99) that would apply to planning and implementation of compensatory mitigation projects (Federal Register, March 28, 2006).

The Guidelines are further clarified in Regulatory Guidance Letter 93-02, which details the flexible nature of the Guidelines, emphasizing the “room for judgment” provided in arriving at conclusions and the level of documentation reflective of the severity of the impacts. In conducting a review of alternatives to a proposed project, factors in determining the level of flexibility given in reviewing alternatives include whether the proposed action is “located in aquatic resources of limited natural function,” has “little potential for secondary or cumulative impacts,” or “has temporary impacts.”

The determinations of compliance were based on the type of proposed action. Issuance of the RGP, establishment of the LOP procedures, and implementation of the mitigation elements were evaluated programmatically with respect to alternatives (40 CFR 230.10(a)), compliance with restrictions and avoidance of significant degradation (40 CFR 230.10(b) and (c)), and minimization of adverse impacts (40 CFR 230.10(d)). The determination of compliance applies to the RGP as a final evaluation in advance that would apply to each and every discharge authorized under the RGP (40 CFR 230.12(b)). The determination of compliance for the establishment of the LOP procedures would be addressed programmatically with the understanding that future LOPs would have their own tiered, site-specific evaluation of compliance with the section 404(b)(1) Guidelines. Evaluation of the mitigation elements with respect to the Guidelines would be programmatic in nature with the understanding that compliance with the mitigation framework is a requirement of issued permits that would help authorized permit actions better comply with the Guidelines.

## **2.1 ALTERNATIVES**

Section 230.10(a) requires an evaluation of alternatives to the proposed action. The section states “*no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem.*” An alternative is practicable if it is “*available and capable of being after taking into consideration cost, existing technology, and logistics in light of the overall project purpose.*” The overall purpose of the SAMP is to improve the Corps and Department’s capacity for making permitting decisions in the Watershed using an approach that balances aquatic resource

protection with reasonable economic development and infrastructure needs. Generally, the Corps can only authorize the least environmentally damaging practicable alternative (LEDPA). Documentation for compliance with 40 CFR 230.10(a) varies depending on the type of proposed action.

### **2.1.1 Regional General Permit**

Issuance of the RGP for maintenance does not require a discussion of alternatives as it relates to avoidance of discharge of dredged or fill material. According to 40 CFR 230.7(b)(1), section 230.10(a) is not applicable to RGPs. Consideration of RGPs under the Guidelines focuses on subparts C-F as well as the determination of the cumulative effects that would occur from the RGP until its expiration.

### **2.1.2 Letter of Permission Procedures**

Establishment of the LOP procedures does not require a detailed discussion of alternatives as it relates to avoidance of discharge of dredged or fill material. Establishment of the LOP procedures does not represent any final action for an individual proposed project. Full compliance with 40 CFR 230.10(a) would be determined on an individual basis with each future application for a permit.

The findings of the SAMP Analytical Framework and identification of aquatic resource integrity areas provide a basis for future documentation of compliance with 40 CFR 230.10(a). As stated before, in RGL 93-02 the level of review can be influenced by the location of the proposed activity in “aquatic resources of limited natural function.” The Analytical Framework of the SAMP allowed for the identification of such aquatic resources with limited natural function as well as identification of aquatic resource with higher natural function. Of the 1,666 acres of riparian habitat including 959 acres of medium to high integrity riparian habitat, 65% of the riparian habitat (1,076 acres) is within the aquatic resource integrity areas, including 81% of the medium to high integrity riparian habitat (780 acres). (See Table 2-1 the SAMP document [Corps, 2008]).

Future projects that propose to impact the aquatic resources outside of the aquatic resource integrity areas would generally impact aquatic resources with low ecological integrity or would have been compromised through lack of connectivity or substantial urbanization. There would be no threshold for eligibility under abbreviated permitting such that larger amount of impacts may be authorized under a letter of permission compared to the existing 0.5-acre threshold for eligibility under most NWPs. Even with the potential increased impact area, the level of documentation to demonstrate compliance with 40 CFR 230.10(a) for each future LOP would be reflective of the limited natural functions within the aquatic resource proposed for impact.

Within the aquatic resource integrity areas, the threshold for abbreviated permitting for the discharge of dredged or fill material would become more stringent, i.e., from 0.5 acre for most of the current NWP's down to 0.1 acre under the SAMP LOP procedures. Proposed projects within the aquatic resource integrity areas that discharge dredged or fill material into greater than 0.1 acre would be evaluated as a SIP with a more formal analysis of alternatives in accordance with 40 CFR 230.10(a). Also, proposed projects outside the aquatic resource integrity areas that propose to convert soft-bottom channel to hard-bottom channel within the five major stream systems would require an SIP and undergo a formal analysis of alternatives. Given the documented high integrity of the aquatic resources, the level of review would be greater, allowing for better attainment of compliance in evaluating and selecting alternatives.

The other alternatives discussed in the programmatic EIS/EIR (Section 2.2) have different approaches to permitting than the proposed alternative. Alternative 1, No Project (Existing Case-by-Case Permitting) does not make any distinction in ecological integrity on a watershed basis, although ecological integrity may be considered on a site-specific level. Conventional permitting policies are insensitive to watershed patterns of ecological integrity and the same thresholds for requiring a SIP are employed for pristine, high integrity aquatic resources that may provide habitat for a large number of biota as for highly degraded, low integrity aquatic resources that provide habitat for generalist, urban-adapted species. Thus, projects proposing impacts greater than 0.1 acre within the 780 acres of aquatic resources with medium-high integrity within the aquatic resource integrity areas would be processed as NWP's, even when these areas have considerable amount of ecological functions. Due to the lack of upfront identification of distinctions in ecological integrity, future projects may result in greater impacts to aquatic resources with high ecological integrity than under the SAMP permitting processes.

Alternative 2, Complete Avoidance (No Permits Issued) and Alternative 3, Avoidance Except for Bridges and Utility Lines (Limited Permitting) also do not make any distinction in ecological integrity on a watershed basis. However, Alternative 2 would not allow for any impacts to aquatic resources regardless of whether the resources are of high or low ecological integrity, whereas Alternative 3 would allow for limited impacts from road crossings and utility lines. No distinction would be made for an aquatic resource possessing limited natural function, and such aquatic resources would be treated the same as a high functioning aquatic resource. Thus, the 707 acres of low integrity riparian habitat would have the same treatment as the 959 acres of medium-high integrity riparian habitat. All direct impacts to aquatic resources would be avoided. In some cases, indirect impacts would be expected to occur from development outside of a waterway due to changes in hydrology, pollutant loading, noise, and light.

Alternative 4, General Plan Build-out without Avoidance (Full Permitting) also does not make any distinction in ecological integrity on a watershed basis. Alternative 4 would allow for any impacts to aquatic resources provided that the action is consistent with local general plans. No

distinction would be made for an aquatic resource possessing high amount of natural function, and such aquatic resources would be treated the same as a low functioning aquatic resource. Thus, the 959 acres of medium-high integrity riparian habitat would have the same treatment as the 707 acres of low integrity riparian habitat. Although local general plans do require open space, these determinations have not been based on a comprehensive assessment of aquatic resources within the Watershed. Second, these local general plans may be subject to modification based on other considerations besides aquatic resource integrity.

Compared to the preferred alternative (SAMP) on a program level, the other alternatives do not fulfill the overall project purpose of improving the Corps and Department's capacity for making permitting decisions in the Watershed using an approach that balances aquatic resource protection with reasonable economic development and infrastructure needs. Alternative 4 does not sufficiently protect the aquatic environment, potentially allowing for significant impacts to high quality aquatic resources within areas zoned for development and impacts per the local general plans. Alternatives 1 and 4 are insufficient in protecting the aquatic environment, because medium-high integrity riparian resources would be given the same level of regulatory review as low integrity riparian resources in terms of having the same eligibility thresholds for review under an abbreviated permitting process. Alternatives 2 and 3 do not allow for reasonable economic development, disallowing for impacts for all sorts of activities even if the proposed activity may be located in an area of low ecological integrity with minimal wetland and riparian functions. Based on these considerations, the proposed SAMP (Alternative 5) achieves the overall project purpose and establishes a framework for guiding the amount of documentation needed for future permit actions to comply with the 40 CFR 230.10(a).

Compliance for individual projects proposed to be authorized as LOPs with 40 CFR 230.10(a) will be determined on an individual basis. The determination of compliance builds upon the Analytical Framework developed for this SAMP, focusing on the location of the proposed permit action with respect to the aquatic resource integrity area. The documentation for projects that affect aquatic resources with low functions would be qualitatively different from those projects that affect aquatic resources with medium-high level of functions.

### **2.1.3 Mitigation Elements**

Implementation of the mitigation elements does not require a discussion of alternatives as it relates to avoidance of discharge of dredged or fill material. These elements generally are not permit actions and are often required as permit special conditions in the context of meeting other requirements of the section 404(b)(1) Guidelines. When a mitigation element is in the form of a stand-alone restoration or creation project, a separate analysis of alternatives may be required.

Only the proposed alternative, the SAMP, incorporates the proposed mitigation elements. The mitigation framework, Strategic Mitigation Plan, and Mitigation Coordination Program all rely on the SAMP Analytical Framework. None of the other alternatives rely on the SAMP Analytical Framework and cannot implement the proposed mitigation elements on a strategic basis throughout the Watershed. The determination of baseline resource conditions as part of the SAMP Analytical Framework has important advantages in the development of a comprehensive mitigation policy, allowing for identification of areas that can be restored for maximizing ecological benefits on a site level and on a landscape level. This is especially important in compensatory mitigation site selection, which allows for placement of mitigation sites in locations where the landscape would not frustrate the objectives of mitigation implementation because of external stressors (e.g., urbanization, lack of buffers, inadequate hydrologic support). Since only the proposed alternative has this goal of incorporating the mitigation elements, the proposed alternative is more environmentally beneficial than the alternatives.

## **2.2 PROHIBITIONS AND SIGNIFICANT DEGRADATION**

Activities permitted under section 404 must not result in violations of other environmental laws and must not result in significant degradation (40 CFR 230.10(b) and (c)). More specifically, the activity must not violate applicable State water quality standards; violate toxic effluent standards of prohibition under section 307 of the CWA; jeopardize the continued existence of an endangered or threatened endangered species or adversely modify critical habitat of a listed species; or violate requirements to protect designated marine sanctuaries. The activity must not result in significant degradation that would result in significant adverse effects on the following endpoints: human health and welfare including effects on municipal water supplies, fish, shellfish, wildlife, and special aquatic sites; on life stages of aquatic life and other wildlife dependent on aquatic ecosystems; on aquatic ecosystem diversity, productivity, and stability including effects such as loss of fish and wildlife habitat and loss of wetlands to assimilate nutrients or purify water; or on recreational, aesthetic, and economic values. According to sections 230.10(c) and 230.11, findings of significant degradation rely on “factual determinations, evaluations, and tests required by subparts B and G, and after consideration of subparts C through F” and H of the Guidelines.

Evaluating the SAMP with respect to prohibitions and significant degradation applies to issuance of the RGP and establishment of the LOP procedures. The mitigation elements reduce or compensate for impacts in a manner superior to the existing case-by-case mitigation policy currently in place and do not warrant an analysis for significant degradation.

## **2.2.1 Prohibitions**

### **2.2.1.1 Applicable State Water Quality Standards**

This section presents a focused analysis of the section 404(b)(1) Guidelines with considerations from the U.S. Army Engineer Research and Development Center (ERDC) water quality and hydrologic integrity data for identifying areas that would receive greater agency review. The functional assessment conducted by ERDC for the SAMP addressed a wide range of water quality and hydrology considerations that relate to avoidance, minimization, and mitigation of potential impacts that could result from the implementation of the proposed permitting procedures. In addition, standard conditions required of the proposed alternate permitting processes would be discussed in how they reduce water quality degradation.

The Corps (Smith 2000) conducted an assessment of the riparian ecosystems of the Watershed. The assessment addressed three ecosystem integrity attributes for hydrology, water quality, and habitat. This Corps study (Smith 2000) addressed four indicators of water quality integrity (nutrient increase, pesticide increase, hydrocarbon increase, and sediment increase). An additional five indicators were selected to reflect the condition of the stream that transports pollutants and three indicators were employed to reflect the condition of a riparian ecosystem's ability to physically capture and biogeochemically process pollutants. With regard to hydrologic integrity, several factors were identified as influencing the frequency, magnitude, and temporal distribution of stream discharge; a second set of factors was identified as influencing the hydrologic linkage between the stream channel and the active floodplain and adjacent terraces.

Through identification of water bodies that exhibit moderate to high hydrologic and water quality integrity, the SAMP is able to identify areas in advance that would receive increased permit review in order to minimize degradation from impacts to below significance. In identifying these areas as aquatic resource integrity areas, future section 404 permit actions would involve SIPs for any permanent discharge of dredged or fill material proposing to impact greater than 0.1 acre. The advanced assessment of aquatic resources has resulted in greater analysis of opportunities for avoidance and minimization of impacts.

The RGP would not be expected to result in violation of water quality standards. The RGP would authorize temporary impacts up to 0.5 acre of which no more than 0.1 acre may be vegetated with native vegetation. The RGP would apply to areas outside of aquatic resource integrity areas, which do not have high functioning aquatic resources. The general conditions of the RGP would further ensure that any impacts to water quality would be minimal (Table 1). One of the general conditions includes requirements for section 401 certification by the State.

**Table 1. General Conditions of the Regional General Permit for maintenance activities, which would be authorized for use in the San Diego Creek Watershed SAMP eligible areas located outside the aquatic resource integrity areas.**

RGP General Condition (GC)	Description
1. Expiration	This RGP shall expire five years from its effective date. Further reauthorizations of this permit will be contingent upon substantial compliance with permit conditions, including the provision of notifications. Failure to comply with these conditions could result in the suspension or revocation of this permit prior to its expiration date, or its non-renewal.
2. Impact Limits	This RGP authorizes up to 0.5 acre of temporary impacts, of which up to 0.1 acre may be vegetated by predominantly native wetland or riparian vegetation. Non-native wetland vegetation does not count towards the 0.1-acre threshold. For facilities with an established maintenance baseline, beyond 0.1 acre of vegetation may be removed only if the work is consistent with the established maintenance baseline.
3. Eligible Areas	This RGP shall be available for use only in areas outside of the aquatic resource integrity areas (Figures 3-2 and 3-3).
4. Notification	<p>The permittee must provide the Corps with prior notification for each separate maintenance activity at each site. A complete notification includes the following information:</p> <ol style="list-style-type: none"> <li>1. Name, address and telephone numbers of the applicant, and appropriate point of contact and their address and phone number;</li> <li>2. Project description of proposed activities;</li> <li>3. Pre-project photographs of the project site;</li> <li>4. A site location map and view of the project showing areas and acreage to be impacted, including any areas with native riparian and/or wetland vegetation; submit on 8.5" x 11" sheets;</li> <li>5. Location coordinates: latitude/longitude or UTM's;</li> <li>6. Volume, type and source of material to be temporarily placed into waters of the United States;</li> <li>7. Total area of waters of the United States to be directly and indirectly affected; and</li> <li>8. Proposed project schedule.</li> </ol>

RGP General Condition (GC)	Description
5. Soil Erosion and Siltation Controls	Appropriate erosion and siltation controls such as siltation or turbidity curtains, sedimentation basins, and/or hay bales or other means designed to minimize turbidity in the watercourse to prevent exceedences background levels existing at the time of project implementation, shall be used and maintained in effective operating condition during project implementation. Projects are exempted from implementing controls if site conditions preclude their use, or if site conditions are such that the proposed work would not increase turbidity levels above the background level existing at the time of the work. All exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be stabilized at the earliest practicable date to preclude additional damage to the project area through erosion or siltation and no later than November of the year the work is conducted to avoid erosion from storm events.
6. Equipment	If personnel would not be subjected to additional, potential hazardous conditions, heavy equipment working in or crossing wetlands must be placed on temporary construction mats (timber, steel, geotextile, rubber, etc.), or other measures must be taken to minimize soil disturbance such as using low pressure equipment. Temporary construction mats shall be removed promptly after construction.
7. Suitable Material	No discharge of dredged or fill material into jurisdictional waters may consist of unsuitable materials (e.g., trash, debris, car bodies, asphalt, etc.) and material discharged must be free from toxic pollutants in toxic amounts (see section 307 of the CWA).
8. Management of Water Flows	To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. To the maximum extent practicable, the activity must provide for the retention of excess flows from the site and for the maintenance of surface flow rates from the site similar to pre-project conditions, while not increasing water flows from the project site, relocating water, or redirecting water flow beyond pre-project conditions unless it benefits the aquatic environment (e.g., stream restoration or relocation activities).

RGP General Condition (GC)	Description
9. Removal of Temporary Fills	Any temporary fills must be removed in their entirety and the affected areas returned to their pre-existing conditions, including any native riparian and/or wetland vegetation. If an area impacted by such temporary fill is considered likely to naturally reestablish native riparian and/or wetland vegetation within two years to a level similar to pre-project or pre-event conditions, the permittee will not be required to do restore the riparian and/or wetland vegetation. However, Exotic Species Management may be required to prevent the establishment of invasive exotic vegetation. (See Condition #14).
10. Preventive Measures	Measures must be adopted to prevent potential pollutants from entering the watercourse. Within the project area, construction materials, and debris, including fuels, oil, and other liquid substances shall be stored in a manner as to prevent any runoff from entering jurisdictional areas.
11. Staging of Equipment	Staging, storage, fueling, and maintenance of equipment must be located outside of the waters in areas where potential spilled materials will not be able to enter any waterway or other body of water.
12. Fencing of Project Limits	Prior to initiation of the project, the boundaries of the project's impact area must be delimited by the placement of temporary construction fencing, staking, and/or signage. Any additional jurisdictional acreage impacted outside of the approved project footprint shall be mitigated at a 5:1 ratio. In the event that additional mitigation is required, the type of mitigation shall be determined by the Corps in accordance with the SAMP mitigation framework and may include wetland enhancement, restoration, creation, or preservation.
13. Avoidance of Breeding Season	With regard to federally listed avian species, avoidance of breeding season requirements shall be those specified in the section 7 consultation for the RGP. For all other species, initial vegetation clearing in waters of the U.S. must occur between September 15 and March 15, which is outside the breeding season. Work in waters may occur during the breeding season between March 15 and September 15 if bird surveys indicate the absence of any nesting birds within a 50-foot radius.
14. Exotic Species Management	All giant reed ( <i>Arundo donax</i> ), salt cedar ( <i>Tamarix spp.</i> ), and castor bean ( <i>Ricinus communis</i> ) must be removed from the affected area and ensure that the affected area remains free from these invasive, non-native species for a period of five years from completion of the project.
15. Site Inspections	The Corps shall be allowed to inspect the site at any time during and immediately after project implementation. In addition, compliance inspections of all mitigation sites shall be allowed at any time.

RGP General Condition (GC)	Description
16. Posting of Conditions	A copy of the RGP conditions shall be included in all bid packages for the project and be available at the work site at all times during periods of work and must be presented upon request by any Corps or other agency personnel with a reasonable reason for making such a request.
17. Water Quality	A section 401 water quality certification must be obtained unless a general section 401 certification is issued or waived for this RGP in the project area (see 33 CFR 330.4(c)).
18. Coastal Zone Management	An individual California state coastal zone management consistency concurrence must be obtained or waived where the project may affect the Coastal Zone (see 33 CFR 330.4(d)).
19. Endangered Species	(a) No activity is authorized which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the ESA or which will destroy or adversely modify the critical habitat of such species. Non-federal permittee shall not begin work on the activity until notified by the Corps that the requirements of the ESA have been satisfied and that the activity is authorized. (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. (c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have “no effect” on listed species or critical habitat, or

RGP General Condition (GC)	Description
	<p>until section 7 consultation has been completed. (d) As a result of formal or informal consultation with the USFWS or NMFS, the district engineer may add species-specific regional endangered species conditions to the RGP notices to proceed. (e) Authorization of an activity by an RGP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the USFWS or the NMFS, both lethal and non-lethal “takes” of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. USFWS and NMFS or their World Wide Web pages at <a href="http://www.USFWS.gov/carlsbad">http://www.USFWS.gov/carlsbad</a> and <a href="http://www.noaa.gov/fisheries.html">http://www.noaa.gov/fisheries.html</a> respectively.</p>
20. Historic Properties	<p>(a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of section 106 of the NHPA have been satisfied. (b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the NHPA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. (c) Non-federal permittees must submit with their application information on historic properties that may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the SHPO or Tribal Historic Preservation Officer (THPO), as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties that the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under section 106 of the</p>

RGP General Condition (GC)	Description
	<p>NHPA has been completed. (d) Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until section 106 consultation is completed. (e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.</p>
21. Mitigation Policy	<p>Compensatory mitigation will not be necessary unless required through general conditions 12, 17, 18, 19, or 20. Should compensatory mitigation be required, it shall be performed in conformance with the mitigation framework developed for the San Diego Creek SAMP, as described in the Corps' SAMP for this Watershed and the Special Public Notice for the San Diego Creek LOP procedures issued concurrently with the Corps SAMP document and the Programmatic EIS/EIR. .</p>

The LOP procedures would not be expected to result in violation of water quality standards. An LOP would authorize any impacts outside of the aquatic resource integrity areas except for those that would result in conversion of soft-bottom channel to hard-bottom channel in mainstem stream systems in specific channels or substantial modification of a compensatory mitigation site. An LOP would authorize permanent discharge of fill in up to 0.1 acre of waters of the U.S. inside the aquatic resource integrity areas and all temporary impacts. The LOP procedures involve coordination with other state and federal agencies to ensure that impacts are further evaluated for avoidance and minimization. The general conditions of the LOP would ensure that

any impacts to water quality would be minor (Table 2). One of the general conditions includes requirements for section 401 certification by the State. Because the LOP is an individual authorization, additional special conditions may be added to ensure that impacts to water quality are minimal and an individual assessment would be performed to evaluate impacts to water quality.

**Table 2. General Conditions of the Letter of Permission procedures used to authorize selected activities in the San Diego Creek Watershed SAMP eligible areas.**

LOP Procedures General Condition (GC)	Description
1. Avoidance and Minimization	The permittee must provide a written statement describing avoidance and minimization measures used to minimize discharges to jurisdictional waters at the project site to the maximum extent practicable.
2. Ineligible Impacts	Projects ineligible for LOP procedures include activities not evaluated for LOP procedures, projects that substantially alter a compensatory mitigation site, or projects that involve the conversion of a soft-bottom channel to a concrete-lined channel within San Diego Creek, Peters Canyon Wash, Hicks Canyon Wash, Serrano Creek, and Borrego Canyon Wash. Those proposed projects must be evaluated using an individual permit. See Figures 3-2 and 3-3.
3. Mitigation Policy	The permit must comply with the SAMP mitigation framework, including the Strategic Mitigation Plan, established in conjunction with the proposed permitting procedures.
4. Soil Erosion and Siltation Controls	Appropriate erosion and siltation controls such as siltation or turbidity curtains, sedimentation basins, and/or hay bales or other means designed to minimize turbidity in the watercourse to prevent exceedences background levels existing at the time of project implementation, shall be used and maintained in effective operating condition during project implementation. Projects are exempted from implementing controls if site conditions preclude their use, or if site conditions are such that the proposed work would not increase turbidity levels above the background level existing at the time of the work. All exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be stabilized at the earliest practicable date to preclude additional damage to the project area through erosion or siltation and no later than November of the year the work is conducted to avoid erosion from storm events.
5. Equipment	If personnel would not be subjected to additional, potential hazardous conditions, heavy equipment working in or crossing wetlands must be placed on temporary construction mats (timber, steel, geotextile, rubber, etc.), or other measures must be taken to minimize soil disturbance such as using low pressure equipment. Temporary construction mats shall be removed promptly after construction.
6. Suitable Material	No discharge of dredged or fill material into jurisdictional waters may consist of unsuitable materials (e.g., trash, debris, car bodies, asphalt, etc.) and material discharged must be free from toxic pollutants in toxic amounts (see section 307 of the CWA).

LOP Procedures General Condition (GC)	Description
7. Management of Water Flows	To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. To the maximum extent practicable, the activity must provide for the retention of excess flows from the site and for the maintenance of surface flow rates from the site similar to pre-project conditions, while not increasing water flows from the project site, relocating water, or redirecting water flow beyond pre-project conditions unless it benefits the aquatic environment (e.g., stream restoration or relocation activities).
8. Removal of Temporary Fills	Any temporary fills must be removed in their entirety and the affected areas returned to their pre-existing conditions, including any native riparian and/or wetland vegetation. If an area impacted by such temporary fill is considered likely to naturally re-establish native riparian and/or wetland vegetation within two years to a level similar to pre-project or pre-event conditions, the permittee will not be required to do restore the riparian and/or wetland vegetation. However, Exotic Species Management may be required to prevent the establishment of invasive exotic vegetation. (See Condition #13).
9. Preventive Measures	Measures must be adopted to prevent potential pollutants from entering the watercourse. Within the project area, construction materials, and debris, including fuels, oil, and other liquid substances shall be stored in a manner as to prevent any runoff from entering jurisdictional areas.
10. Staging of Equipment	Staging, storage, fueling, and maintenance of equipment must be located outside of the waters in areas where potential spilled materials will not be able to enter any waterway or other body of water.
11. Fencing of Project Limits	Prior to initiation of the project, the boundaries of the project's impact area must be delimited by the placement of temporary construction fencing, staking, and/or signage. Any additional jurisdictional acreage impacted outside of the approved project footprint shall be mitigated at a 5:1 ratio. In the event that additional mitigation is required, the type of mitigation shall be determined by the Corps in accordance with the SAMP mitigation framework and may include wetland enhancement, restoration, creation, or preservation.
12. Avoidance of Breeding Season	With regard to federally listed avian species, avoidance of breeding season requirements shall be those specified in the section 7 consultation for the LOP procedures. For all other species, initial vegetation clearing in waters of the U.S. must occur between September 15 and March 15, which is outside the breeding season. Work in waters may occur during the breeding season between March 15 and September 15 if bird surveys indicate the absence of any nesting birds within a 50-foot radius.

LOP Procedures General Condition (GC)	Description
13. Exotic Species Management	All giant reed ( <i>Arundo donax</i> ), salt cedar ( <i>Tamarix spp.</i> ), and castor bean ( <i>Ricinus communis</i> ) must be removed from the affected area and ensure that the affected area remains free from these invasive, non-native species for a period of five years from completion of the project.
14. Site Inspections	The Corps shall be allowed to inspect the site at any time during and immediately after project implementation. In addition, compliance inspections of all mitigation sites shall be allowed at any time.
15. Posting of Conditions	A copy of the LOP conditions shall be included in all bid packages for the project and be available at the work site at all times during periods of work and must be presented upon request by any Corps or other agency personnel with a reasonable reason for making such a request.
16. Post-Project Report	Within 60 days of completion of impacts to waters, as-built drawings with an overlay of waters that were impacted and avoided must be submitted to the Corps. Post-project photographs, which document compliance with permit conditions, must also be provided.
17. Water Quality	An individual section 401 water quality certification must be obtained (see 33 CFR 330.4(c)).
18. Coastal Zone Management	An individual California state coastal zone management consistency concurrence must be obtained or waived where the project may affect the Coastal Zone (see 33 CFR 330.4(d)).
19. Endangered Species	(a) No activity is authorized which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the ESA or which will destroy or adversely modify the critical habitat of such species. Non-federal permittee shall not begin work on the activity until notified by the Corps that the requirements of the ESA have been satisfied and that the activity is authorized. (b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. (c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity “may affect” or will have “no effect” to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps’ determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has

LOP Procedures General Condition (GC)	Description
	<p>provided notification the proposed activities will have “no effect” on listed species or critical habitat, or until section 7 consultation has been completed. (d) As a result of formal or informal consultation with the USFWS or NMFS, the district engineer may add species-specific regional endangered species conditions to the LOPs. (e) Authorization of an activity by an LOP does not authorize the “take” of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA section 10 Permit, a Biological Opinion with “incidental take” provisions, etc.) from the USFWS or the NMFS, both lethal and non-lethal “takes” of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. USFWS and NMFS or their World Wide Web pages at <a href="http://www.USFWS.gov/carlsbad">http://www.USFWS.gov/carlsbad</a> and <a href="http://www.noaa.gov/fisheries.html">http://www.noaa.gov/fisheries.html</a> respectively.</p>
20. Historic Properties	<p>(a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of section 106 of the NHPA have been satisfied. (b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the NHPA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. (c) Non-federal permittees must submit with their application information on historic properties that may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the SHPO or Tribal Historic Preservation Officer (THPO), as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties that the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under section 106 of the NHPA has been completed. (d) Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). If NHPA section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until section 106 consultation is completed. (e) Prospective permittees should be aware that section</p>

LOP Procedures General Condition (GC)	Description
	110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.
21. Air Quality	No activity is authorized that causes or contributes to any new violation of national ambient air quality standards, increases the frequency or severity of any existing violation of such standards, or delays timely attainment of any such standard or interim emission reductions, as described in the applicable California State Implementation Plan for the South Coast Air Basin. As part of the Corps application package, the applicant shall submit an air quality emission and impact analysis for the proposed activity if the project would result in long-term or permanent stationary (point or area) source or indirect mobile source emissions, or if the proposed activity would result in area source and direct mobile source emissions that exceed the annual <i>de minimis</i> emissions thresholds for any criteria air pollutant or its precursors.

### 2.2.1.2 Toxic Effluent Standard or Prohibition Under Section 307 of the CWA

Evaluation of the RGP pursuant to 40 CFR 230.10((b)(2) indicates the RGP would not be expected to result in violation of toxic effluent standards of prohibitions under section 307 of the CWA. The general conditions of the RGP would ensure that any impacts to water quality would be minimal. RGP GC 17 requires section 401 certification by the State and 7 (Suitable Material) addresses toxic pollutants.

The LOP procedures would not be expected to result in violation of toxic effluent standards of prohibitions under section 307 of the CWA. The general conditions of the LOP would ensure that any impacts to water quality would be minimal. One of the general conditions includes requirements for section 401 certification by the State. Because the LOP is an individual authorization, additional special conditions may be added to ensure that violations do not occur.

For the LOP, the following general conditions address toxic pollutants: LOP GC 6 (Suitable Material) and 17 (Water Quality Certification).

### **2.2.1.3 Listed Threatened or Endangered Species or their Critical Habitat**

For all activities under the RGP and LOP procedures, the general conditions prohibit activities that jeopardize the continued existence of any federally listed threatened and/or endangered species or the destruction or adverse modification to their critical habitat without a consultation with the USFWS or NOAA Fisheries, where appropriate, pursuant to section 7 of the ESA. The following general conditions address federally listed species: RGP GC 13 (Avoidance of Breeding Season) and 19 (Endangered Species), and LOP GC 12 (Avoidance of Breeding Season) and 19 (Endangered Species).

### **2.2.1.4 Designated Marine Sanctuaries**

This requirement is not applicable to the RGP and the LOP procedures, because there are no marine sanctuaries in the Watershed area.

## **2.2.2 Potential Impacts and Significant Degradation**

According to 40 CFR 230.11, factual determinations of the potential effects of a proposed discharge of dredged or fill material on the physical, chemical, and biological characteristics of the aquatic environment, including whether the discharge would result in significant degradation, rely on evaluations performed with respect to subparts C-H of the Guidelines. For each evaluation, the resource element is considered with respect to the aquatic resource integrity areas. In general, aquatic resources within the integrity areas tend to be less disturbed and possess a higher degree of desirable attributes with respect to the resource elements listed below. In developing policies based on identified aquatic resource integrity areas, the SAMP minimizes impacts to aquatic resources with substantial level of functions and/or allows for impacts in areas with ongoing anthropogenic disturbance regimes.

### **2.2.2.1 Physical and Chemical Characteristics of the Aquatic Ecosystem**

#### **2.2.2.1.1 Substrate**

Within the Watershed, there are about 2,552 acres of aquatic resources, most of which are expected to have substrate functions related to waters of the U.S. About 1,644 acres of aquatic resources (64%) and associated substrate are within the aquatic resource integrity areas. The aquatic resource integrity areas encompass high functioning and strategic wetlands. Substrates that possess the functions typical of intact aquatic resources lie within the aquatic resource integrity areas.

The RGP would not have any substantial impact to substrate characteristics. The RGP would be used only outside the aquatic resource integrity areas and would result in limited amounts of temporary impacts to already degraded aquatic resources. Any impacts to wetland substrate would be reduced due to comply with RGP GC 6 (Equipment) to maintain proper equipment operation on substrate. The impacts of the RGP to substrate would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Outside of the aquatic resource integrity areas, the substrates possess reduced amount of functions due to numerous stressors and human activities. Impacts authorized by LOPs to these substrates would not be expected to have large impacts. Nevertheless, an LOP may not be used outside of aquatic resource integrity areas to substantially modify mitigation sites or to convert soft-bottom channels to concrete-lined channels for certain stream courses, including San Diego Creek, Peters Canyon Wash, Hicks Canyon Wash, Serrano Creek, and Borrego Canyon Wash; and as such, further protects substrate functions. Inside the aquatic resource integrity areas, the aquatic resource substrates would have high to moderate level of functions. Activities would be allowed to result in permanent impacts to less than 0.1 acre of waters of the U.S. or for temporary impacts. Due to the allowance of permanent impacts to smaller areas or for temporary impacts, the LOP procedures would not be expected to have substantial impact to substrate functions. Any impacts to wetland substrate would be reduced due to LOP GC 5 (Equipment) to maintain proper equipment operation on substrate. In any event, each LOP must make a separate determination of project impacts to the characteristics of the physical substrate.

In addition, the mitigation elements would allow for greater amounts of substrate restoration. Restoration and creation would occur in the context of expanding existing natural areas and in landscape settings where attainment of the restoration objectives would not be compromised by adjacent land use features. The SAMP mitigation framework would result in improved effectiveness of compensatory mitigation, and as a result, increased aquatic resources with associated substrate functions.

#### ***2.2.2.1.2 Suspended Particulates/Turbidity***

The RGP would not have any substantial impact on suspended particulates/turbidity. The RGP would be used only outside the aquatic resource integrity areas and would result in limited amounts of temporary impacts to already degraded aquatic resources. Any suspended particulates/turbidity impacts would be reduced due to RGP GC 5 (Soil Erosion and Siltation Controls) to control turbidity, 9 (Removal of Temporary Fills) to limit the introduction of turbidity sources, and 17 (Water Quality) to require a 401 certification. The impacts of the RGP on suspended particulates/turbidity would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Impacts authorized by LOPs would not be expected to have large impacts to suspended particulates and turbidity. Any suspended particulates/turbidity impacts would be reduced due to LOP GC 4 (Soil Erosion and Siltation Controls) to control turbidity, 8 (Removal of Temporary Fills) to limit the introduction of turbidity sources, and 17 (Water Quality) to require a 401 certification. In any event, each LOP must make a separate determination of project impacts to suspended particulates/turbidity.

In addition, the mitigation elements would allow for greater amounts of revegetation throughout the Watershed. Compensatory mitigation in the form of restoration would occur through planting of more vegetation, much of which would further stabilize soils and prevent suspension of sediments.

#### ***2.2.2.1.3 Water***

The RGP would not have any substantial impact on the water column and interstitial water. The RGP would be used only outside the aquatic resource integrity areas and would result in limited amounts of temporary impacts to already degraded aquatic resources. Any impacts to water would be reduced due to RGP GC 5 (Soil Erosion and Siltation Controls) to control turbidity, 7 (Suitable Material) to control toxic discharges, 9 (Removal of Temporary Fills) to limit the introduction of turbidity sources, 10 (Preventive Measures) to minimize accidental discharge of pollutants, 11 (Staging of Equipment) to control pollutant discharges from equipment, and 17 (Water Quality) to require a 401 certification. The impacts of the RGP on water would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Impacts authorized by LOPs would not be expected to have large impacts to the water column and interstitial water. Any water impacts would be reduced due to LOP GC 4 (Soil Erosion and Siltation Controls) to control turbidity, 6 (Suitable Material) to control toxic discharges, 8 (Removal of Temporary Fills) to limit the introduction of turbidity sources, 9 (Preventive Measures) to minimize accidental discharge of pollutants, 10 (Staging of Equipment) to control pollutant discharges from equipment, and 17 (Water Quality) to require a 401 certification. In any event, each LOP must make a separate determination of project impacts to water.

In addition, the mitigation elements would allow for greater amounts of revegetation throughout the Watershed. Restoration would occur through planting of more vegetation, much of which would improve water quality through pollutant uptake and entrainment.

#### ***2.2.2.1.4 Current Patterns and Water Circulation***

The RGP would not have any substantial impact on current patterns and water circulation. The RGP would be used only outside the aquatic resource integrity areas and would result in limited amounts of temporary impacts to degraded aquatic resources. These temporary impacts would not affect post-project hydrology. Any impacts to current patterns and water circulation would be reduced due to RGP GC 8 (Management of Water Flows) to maintain existing hydrology. The impacts of the RGP on current patterns and water circulation would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Impacts authorized by LOPs would not be expected to have large impacts to current patterns and water circulation. Any impacts to current patterns and water circulation would be reduced due to LOP GC 7 (Management of Water Flows) to maintain existing hydrology. In any event, each LOP must make a separate determination of project impacts to current patterns and water circulation.

In addition, the mitigation elements would allow for greater amounts of revegetation throughout the Watershed. Restoration would occur through planting of more vegetation, much of which would minimize excessive flow velocities.

#### ***2.2.2.1.5 Normal Water Fluctuations***

The RGP would not have any substantial impact on normal water fluctuations. The RGP would be used only outside the aquatic resource integrity areas and would result in limited amounts of temporary impacts to already degraded aquatic resources. These temporary impacts would not affect post-project hydrology. Any impacts to normal water fluctuations would be reduced due to RGP GC 8 (Management of Water Flows) to maintain existing hydrology. The impacts of the RGP on normal water fluctuations would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Impacts authorized by LOPs would not be expected to have large impacts to normal water fluctuations. Any impacts would be reduced due to LOP GC 7 (Management of Water Flows) to maintain existing hydrology. In any event, each LOP must make a separate determination of project impacts to normal water fluctuations.

In addition, the mitigation elements would allow for greater amounts of revegetation throughout the Watershed. Restoration would occur through planting of more vegetation, much of which would further minimize excessive flow velocities.

#### **2.2.2.1.6 Salinity Gradients**

Within the Watershed, waters subject to saline influences are within lower San Diego Creek. The tidal prism travels upstream of Campus Drive. Areas subject to saline influences are all within the aquatic integrity areas.

The RGP would not have any substantial on salinity gradients. The RGP would be used only outside the aquatic resource integrity areas. There are no saline waters outside of the aquatic resource integrity areas. The impacts of the RGP on salinity gradients would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Outside of the aquatic resource integrity areas, there are no saline influences. Inside the aquatic resource integrity areas, saline influences occur only in lower San Diego Creek. Impacts would be allowed for permanent impacts to less than 0.1 acre of waters of the U.S. or for temporary impacts. Due to the allowance of permanent impacts to smaller areas or for temporary impacts, the LOP procedures would not be expected to have substantial impact to substrate functions. Any suspended particulates/turbidity impacts would be reduced due to LOP GC 4 (Soil Erosion and Siltation Controls) to control turbidity and 8 (Removal of Temporary Fills) to limit the introduction of turbidity sources. In any event, each LOP must make a separate determination of project impacts to suspended particulates/turbidity.

The mitigation elements would not affect salinity gradients, because restoration and creation activities would not affect the tidal prism in lower San Diego Creek.

### **2.2.2.2 Biological Characteristics of the Aquatic Ecosystem**

#### **2.2.2.2.1 Threatened and Endangered Species**

Within the Watershed, there are several listed threatened and endangered species including the California gnatcatcher, the least Bell's vireo, the southwestern willow flycatcher, the light-footed clapper rail, and the Riverside fairy shrimp. The California gnatcatcher has designated critical habitat in the Watershed. While developing the SAMP, there was an explicit effort to include critical habitat and known observed locations of threatened and endangered species within the aquatic resource integrity areas.

The RGP would not have any substantial impact to threatened and endangered species. The RGP would be used only outside the aquatic resource integrity areas and would result in limited amounts of temporary impacts to already degraded aquatic resources, which tend not to have threatened and endangered species. The RGP would not result in removal of large amounts of native vegetation. Impacts to threatened and endangered species are not authorized by this RGP without an incidental take statement due to RGP GC 19 (Endangered Species). The impacts of the RGP to threatened and endangered species would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Outside of the aquatic resource integrity areas, threatened and endangered species are not expected. These types of aquatic resources experience numerous stressors and human activities. Nevertheless, an LOP may not be used outside of aquatic resource integrity areas to substantially modify mitigation sites or to convert soft-bottom channels to concrete-lined channels for certain stream courses, including San Diego Creek, Peters Canyon Wash, Hicks Canyon Wash, Serrano Creek, and Borrego Canyon Wash, areas that may provide indirect habitat support to threatened and endangered species. Inside the aquatic resource integrity areas, there are sizable high quality aquatic resources. Impacts would be allowed for permanent impacts to less than 0.1 acre of waters of the U.S. or for temporary impacts. Due to the allowance of permanent impacts to smaller areas or for temporary impacts, the LOP procedures would not be expected to have substantial impact to threatened and endangered species. Regardless of the location inside or outside of an aquatic resource integrity area, impacts to threatened and endangered species without an incidental take statement are not authorized by this LOP and will be addressed as outlined in LOP GC 19 (Endangered Species). In any event, each LOP must make a separate determination of project impacts to threatened and endangered species.

In addition, the mitigation elements would allow for greater amounts of habitat for threatened and endangered species. Restoration and creation would occur in the context of expanding existing natural areas and in landscape settings where attainment of the restoration objectives would not be compromised by adjacent land use features. The additional willows, mulefat, and cottonwoods would provide more habitat for threatened and endangered species. In fact, one of the considerations for selecting compensatory mitigation sites was whether the restoration/creation would benefit a threatened or endangered species.

#### ***2.2.2.2.2 Fish, Crustaceans, Mollusks, and Other Aquatic Organisms***

Within the Watershed, aquatic organisms are of limited diversity. Native fish, crustaceans, and mollusks are virtually nonexistent, except within tidally influenced portions of San Diego Creek. The most abundant aquatic organisms are aquatic insects, which would be greatest in abundance for intact intermittent streams. Ephemeral streams do not have aquatic insects and perennial/intermittent streams in an urban landscape have limited occurrences of aquatic insects. Areas with high level of aquatic organisms exist within the aquatic resource integrity areas around intermittent and perennial streams in the upper Watershed and around the tidally influenced portion of San Diego Creek.

The RGP would not have any substantial impact to aquatic organisms. The RGP would be used only outside the aquatic resource integrity areas and would result in limited amounts of temporary impacts to already degraded aquatic resources. The RGP would not result in removal of large amounts of native vegetation. Any indirect impacts to aquatic organisms would be

reduced due to RGP GC 5 (Soil Erosion and Siltation Controls) to control turbidity and erosion and 8 (Management of Water Flows) to control hydrology. The impacts of the RGP to aquatic organisms would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Outside of the aquatic resource integrity areas, there are still some areas that may have incidental aquatic organisms. These aquatic resources possess reduced amount of native aquatic organisms due to numerous stressors and human activities. Impacts authorized by LOPs within these aquatic resources would not be expected to have large impacts. Nevertheless, an LOP may not be used outside of aquatic resource integrity areas to substantially modify compensatory mitigation sites or to convert soft-bottom channels to concrete-lined channels for certain stream courses, including San Diego Creek, Peters Canyon Wash, Hicks Canyon Wash, Serrano Creek, and Borrego Canyon Wash, which further protects aquatic organisms. Inside the aquatic resource integrity areas, there are sizable high quality aquatic resources. Impacts would be allowed for permanent impacts to less than 0.1 acre of waters of the U.S. or for temporary impacts. Due to the allowance of permanent impacts to smaller areas or for temporary impacts, the LOP procedures would not be expected to have substantial impact to aquatic organisms. Regardless of the location inside or outside of an aquatic resource integrity area, activities authorized by the LOP would be reduced due to LOP GC 4 (Soil Erosion and Siltation Controls) to control turbidity and erosion and 7 (Management of Water Flows) to control hydrology. In any event, each LOP must make a separate determination of project impacts to aquatic organisms.

In addition, the mitigation elements would allow for greater amounts of aquatic organism habitat. Restoration and creation would occur in the context of expanding existing natural areas and in landscape settings where attainment of the restoration objectives would not be compromised by adjacent land use features. The additional willows, mulefat, and cottonwoods would provide more allochthonous material mostly for aquatic insects, but also for downstream aquatic organisms in lower San Diego Creek.

#### ***2.2.2.2.3 Other Wildlife***

Within the Watershed, wildlife are abundant, particularly around intact native habitats including wetlands and riparian areas. In general, wildlife are less abundant around urbanized areas due to stressors such as human noise, domestic animals, pollution, and lack of habitat for food and cover, areas that are generally outside of the aquatic resource integrity areas. Areas with greater wildlife functions exist within the aquatic resource integrity areas including habitat for amphibians, birds, and mammals.

The RGP would not have any substantial impact to wildlife. The RGP would be used only outside the aquatic resource integrity areas and would result in limited amounts of temporary impacts to already degraded aquatic resources. The RGP would not result in removal of large amounts of native vegetation. In addition, any removal must occur outside of the avian breeding season unless surveys indicate the absence of nesting birds, in accordance with RGP GC 13 (Avoidance of Breeding Season). The impacts of the RGP to wildlife would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Outside of the aquatic resource integrity areas, there are still some areas that may have incidental wildlife. These types of aquatic resources possess reduced amount of functions due to numerous stressors and human activities. Impacts authorized by LOPs within these aquatic resources would not be expected to have large impacts. Nevertheless, an LOP may not be used outside of aquatic resource integrity areas to substantially modify mitigation sites or to convert soft-bottom channels to concrete-lined channels for certain stream courses, including San Diego Creek, Peters Canyon Wash, Hicks Canyon Wash, Serrano Creek, and Borrego Canyon Wash, which further protects wildlife. Inside the aquatic resource integrity areas, there are sizable high quality aquatic resources. Impacts would be allowed for permanent impacts to less than 0.1 acre of waters of the U.S. or for temporary impacts. Due to the allowance of permanent impacts to smaller areas or for temporary impacts, the LOP procedures would not be expected to have substantial impact to wildlife. Regardless of the location inside or outside of an aquatic resource integrity area, activities authorized by the LOP must avoid the avian breeding season unless surveys indicate the absence of nesting birds, in accordance with LOP GC 12 (Avoidance of Breeding Season). In any event, each LOP must make a separate determination of project impacts to wildlife.

In addition, the mitigation elements would allow for greater amounts of wildlife habitat. Restoration and creation would occur in the context of expanding existing natural areas and in landscape settings where attainment of the restoration objectives would not be compromised by adjacent land use features. The additional willows, mulefat, and cottonwoods would provide more food and cover opportunities for wildlife.

#### **2.2.2.3 Special Aquatic Sites**

Within the Watershed, there are several special aquatic sites including sanctuaries, wetlands, and mud flats. Within the southwest portion of the Watershed, the San Joaquin Wildlife Sanctuary serves migratory birds and resident species such as the light-footed clapper rail. Throughout the Watershed, there are wetlands along many stream courses. Within the tidally influenced portions of lower San Diego Creek, there may be mud flats. The Watershed does not have coral reefs, vegetated shallows, or riffle and pool complexes. The San Joaquin Wildlife Sanctuary is within an aquatic resource integrity area. The aquatic resource integrity areas encompass high functioning and strategic wetlands.

The RGP would not have any substantial impact to special aquatic sites. The RGP would be used only outside the aquatic resource integrity areas and would result in limited amounts of temporary impacts to already degraded aquatic resources, including wetlands. The RGP would not result in removal of large amounts of native vegetation. The impacts of the RGP to special aquatic sites would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Outside of the aquatic resource integrity areas, there are still special aquatic sites. These types of special aquatic sites possess reduced amount of functions due to numerous stressors and human activities. Impacts authorized by LOPs within these special aquatic sites would not be expected to have large impacts. Nevertheless, an LOP may not be used outside of aquatic resource integrity areas to substantially modify mitigation sites or to convert soft-bottom channels to concrete-lined channels for certain stream courses, including San Diego Creek, Peters Canyon Wash, Hicks Canyon Wash, Serrano Creek, and Borrego Canyon Wash, which further protects special aquatic sites. Inside the aquatic resource integrity areas, there are notable special aquatic sites including the San Joaquin Wildlife Sanctuary, numerous wetlands, and possibly some mud flats in the lower San Diego Creek. Impacts would be allowed for permanent impacts to less than 0.1 acre of waters of the U.S. or for temporary impacts. Due to the allowance of permanent impacts to smaller areas or for temporary impacts, the LOP procedures would not be expected to have substantial impact to special aquatic sites. In any event, each LOP must make a separate determination of project impacts to special aquatic sites.

In addition, the mitigation elements would allow for greater amounts of special aquatic sites. Restoration and creation would occur in the context of expanding existing natural areas and in landscape settings where attainment of the restoration objectives would not be compromised by adjacent land use features. There would be more effective mitigation resulting in higher functioning wetlands and other aquatic resources.

#### **2.2.2.4 Human Use Characteristics**

##### ***2.2.2.4.1 Municipal and Private Water Supplies***

Within the Watershed, municipal and private water supplies come from outside the Watershed (Colorado River and the State Water Project) or from the Orange County Groundwater Basin. Within most of the Watershed, the Orange County Groundwater Basin is overlain with a perched aquifer that intercepts most infiltrated water. Throughout the Watershed, several dozen reservoirs store potable and nonpotable water including, but not limited to, Rattlesnake Reservoir and Sand Canyon Reservoir. Some of the larger reservoirs are located in the aquatic resource integrity areas.

The RGP would not have any substantial impact to municipal and private water supplies. The RGP would be used only outside the aquatic resource integrity areas and would result in limited amounts of temporary impacts to already degraded aquatic resources. The types of activities authorized by the RGP would not impact transport of water, groundwater supplies, and water supply reservoirs. The impacts of the RGP to municipal and private water supplies would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Outside of the aquatic resource integrity areas, there are little municipal and private water supplies. Inside the aquatic resource integrity areas, there are more municipal and private water supplies represented by the water supply reservoirs. If the water supply reservoir is a Water of the U.S., impacts would be allowed for permanent impacts to less than 0.1 acre of waters of the U.S. or for temporary impacts. Due to the allowance of permanent impacts to smaller areas or for temporary impacts, the LOP procedures would not be expected to have substantial impact to water supplies. In any event, each LOP must make a separate determination of project impacts to municipal and private water supplies.

The mitigation elements would not be expected to have any effect on water supplies. For the most part, the mitigation elements would avoid artificial sources of water, because mitigation efforts would focus on using natural hydrology sources to maximize functional gains.

#### ***2.2.2.4.2 Recreational and Commercial Fisheries***

There are no commercial fisheries within the Watershed. Recreational fishing opportunities are minimal. Some individuals fish in lower San Diego Creek, which is tidally influenced. Lower San Diego Creek is within an aquatic resource integrity area. However, the fish expected to be found in lower San Diego Creek would not be expected to be substantial due to the limited tidal influence.

The RGP would not have any substantial impact to recreational fishing. The RGP would be used only outside the aquatic resource integrity areas. The impacts of the RGP to recreational fishing would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Outside of the aquatic resource integrity areas, there are no opportunities for recreational fishing. Inside the aquatic resource integrity areas, specifically lower San Diego Creek, there are some opportunities for recreational fishing. Impacts would be allowed for permanent impacts to less than 0.1 acre of waters of the U.S. or for temporary impacts. Due to the allowance of permanent impacts to smaller areas or for temporary impacts, the LOP procedures would not be expected to have substantial impact to recreational fishing. In any event, each LOP must make a separate determination of project impacts to recreational and commercial fisheries.

In addition, the mitigation elements would allow for some benefit to recreational fishing. Restoration and creation would occur in the context of expanding existing natural areas in lower San Diego Creek. Such activities may make aquatic conditions more conducive for use by some fishes, enhancing fishing opportunities. The SAMP mitigation framework would result in improved effectiveness of compensatory mitigation, and as a result, higher functioning wetlands and other aquatic resources.

#### **2.2.2.4.3 Water-Related Recreation**

Within the Watershed, water-related recreation could occur along most major water bodies. Although hunting and fishing do not occur in appreciable amounts, nature appreciation activities (e.g., hiking and birding) occur wherever there is a waterway with public access. Many of the desirable locations for nature appreciation typically occur along intact waterbodies with an absence of human modification and abundance of native flora, such as willows and cottonwoods, areas typically within the aquatic resource integrity areas.

The RGP would not have any substantial impact to water-related recreation. The RGP would be used only outside the aquatic resource integrity areas and would result in limited amounts of temporary impacts to already degraded aquatic resources. The RGP would not result in removal of large amounts of native vegetation. The impacts of the RGP to water-related recreation would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Outside of the aquatic resource integrity areas, opportunities for substantial water-related recreation would be minimal. Impacts authorized by LOPs would not be expected to have large impacts. Nevertheless, an LOP may not be used outside of aquatic resource integrity areas to substantially modify mitigation sites or to convert soft-bottom channels to concrete-lined channels for certain stream courses, including San Diego Creek, Peters Canyon Wash, Hicks Canyon Wash, Serrano Creek, and Borrego Canyon Wash, which further protects water-related recreation. Inside the aquatic resource integrity areas, opportunities for substantial water-related recreation would be greater. Impacts would be allowed for permanent impacts to less than 0.1 acre of waters of the U.S. or for temporary impacts. Due to the allowance of permanent impacts to smaller areas or for temporary impacts, the LOP procedures would not be expected to have substantial impact to water-based recreation. In any event, each LOP must make a separate determination of project impacts to water-related recreation.

In addition, the mitigation elements would allow for greater attainment of water-related recreation. Restoration and creation would occur in the context of expanding existing natural areas and in landscape settings where attainment of the restoration objectives would not be compromised by adjacent land use features. The SAMP mitigation framework would result in improved effectiveness of compensatory mitigation, and as a result, increased aquatic resources with increased quality recreation opportunities.

#### **2.2.2.4.4 Aesthetics**

Within the Watershed, aquatic areas with high level of aesthetic value would occur mostly along major water bodies. Many of the desirable locations with aesthetically attractive attributes would be around areas without human modification and with an abundance of native flora, such as willows and cottonwoods, areas typically within the aquatic resource integrity areas.

The RGP would not have any substantial impact to aesthetics. The RGP would be used only outside the aquatic resource integrity areas and would result in limited amounts of temporary impacts to already degraded aquatic resources. The RGP would not result in removal of large amounts of native vegetation. The impacts of the RGP to aesthetics are minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Outside of the aquatic resource integrity areas, there would not be much aquatic resources with high level of aesthetic value. Impacts authorized by LOPs would not be expected to have large impacts. Nevertheless, an LOP may not be used outside of aquatic resource integrity areas to substantially modify mitigation sites or to convert soft-bottom channels to concrete-lined channels for certain stream courses, including San Diego Creek, Peters Canyon Wash, Hicks Canyon Wash, Serrano Creek, and Borrego Canyon Wash, which further protects aesthetics. Inside the aquatic resource integrity areas, there would be more areas with substantial aesthetic value. Impacts would be allowed for permanent impacts to less than 0.1 acre of waters of the U.S. or for temporary impacts. Due to the allowance of permanent impacts to smaller areas or for temporary impacts, the LOP procedures would not be expected to have substantial impact to areas with aesthetic value. In any event, each LOP must make a separate determination of project impacts to aesthetics.

In addition, the mitigation elements would allow for greater amounts of aquatic resources with aesthetic value. Restoration and creation would occur in the context of expanding existing natural areas and in landscape settings where attainment of the restoration objectives would not be compromised by adjacent land use features. The SAMP mitigation framework would result in improved effectiveness of compensatory mitigation, and as a result, increased aquatic resources with aesthetic attributes.

#### **2.2.2.4.5 Parks, National and Historical Monuments, and Similar Preserves**

Within the Watershed, aquatic areas associated with parks, national and historical monuments, wilderness areas, research sites, and similar preserves with high level of aesthetic value would occur mostly along major water bodies. A major portion of the protected lands within the Irvine Ranch wildlands and parks (formerly known as the Irvine Ranch Land Reserve) was designated a National Natural Landmark by the Department of the Interior in October 2006. The Irvine Ranch wildlands and parks contain several state and locally recognized preserves including the Limestone Canyon Wilderness Area, San Joaquin Wildlife Sanctuary, Mason Regional Park, Peters Canyon Regional Park, and Bommer Canyon. These areas are included in the aquatic resource integrity areas.

The RGP would not have any impacts to parks, wilderness areas, and similar areas. The RGP would be used only outside the aquatic resource integrity areas and outside of the parks and wilderness areas. The impacts of the RGP to parks and wilderness areas would be minimal.

The LOP procedures would allow for a variety of impacts within and outside the aquatic resource integrity areas. Outside of the aquatic resource integrity areas, there are no aquatic resources associated with parks and wilderness areas. Inside the aquatic resource integrity areas, there are aquatic resources associated with parks and wilderness areas. Impacts would be allowed for permanent impacts to less than 0.1 acre of waters of the U.S. or for temporary impacts. Due to the allowance of permanent impacts to smaller areas or for temporary impacts, the LOP procedures would not be expected to have substantial impact to parks and wilderness areas. In any event, each LOP must make a separate determination of project impacts to parks, national monuments, and similar preserves.

In addition, the mitigation elements would allow for greater amounts of aquatic resources within parks and wilderness areas. Restoration and creation would occur in the context of expanding existing natural areas and in landscape settings where attainment of the restoration objectives would not be compromised by adjacent land use features. Parks and wilderness areas have the advantage of having natural open space that would support restoration and creation efforts.

## **2.3 MINIMIZATION OF ADVERSE EFFECTS**

Activities permitted under section 404 must take appropriate and practicable steps to minimize all potential adverse impacts to the aquatic environment. Possible types of minimization measures include those actions discussed in the Guidelines subpart H. Such minimization measures include selecting the appropriate location for the discharge of dredged material, selecting the type of material to be discharged, controlling the material after discharge, controlling dispersion, implementing appropriate technologies, considerations of measures to minimize impacts to animals and plants, and considerations of measures to minimize impacts affecting human use. Minimization measures include efforts that avoid impacts to specific resource endpoints and the reduction of impacts through alternative methods and technologies.

The SAMP permitting processes undertake initial minimization measures by limiting the locations where the use of the RGP and LOP procedures and as such limit the extent and types of activities that would affect high to moderate quality aquatic resources and mainstem streams within and outside aquatic resource integrity areas. Effectively, the SAMP would minimize the effects of future discharges by the choice of the disposal sites permitted by RGP and LOPs to avoid high to moderate quality resource locations; a minimization measure, which is referenced within 40 CFR Part 230 subpart H within sections 230.70(a), 230.70(c), 230.75(c), 230.76(a), 230.76(b), 230.76(e), and 230.76(f). Through the identification of aquatic resource integrity

areas, the SAMP is programmatically identifying sensitive locations, which are a priority for avoidance, through the development of permit policies that would increase review of impacts to sensitive aquatic resources. Impacts to areas outside of aquatic resource integrity areas would have already addressed the issue of avoiding higher quality resources by virtue of being located in non-sensitive areas of lower aquatic resource integrity.

The SAMP permitting processes also undertake minimization measures through implementation of general conditions with the potential to require special conditions with individual authorizations. The RGP general conditions would require many minimization measures including those for soil erosion and siltation controls (RGP GC 5), equipment management (RGP GC 6), suitable material (RGP GC 7), management of water flows (RGP GC 8), removal of temporary fills (RGP GC 9), preventive measures (RGP GC 10), staging of equipment (RGP GC 11), fencing of impact limits (RGP GC 12), and avoidance of breeding season (RGP GC 13). These conditions combined with the initial eligibility requirements (i.e., allowing the RGP for use with temporary impacts less than 0.5 acre in degraded areas with temporary impacts to less than 0.1 acre of native vegetation) adequately minimize the impacts.

The LOP general conditions would require many minimization measures including those soil erosion and siltation controls (LOP GC 4), equipment management (LOP GC 5), suitable material (LOP GC 6), management of water flows (LOP GC 7), removal of temporary fills (LOP GC 8), preventive measures (LOP GC 9), staging of equipment (LOP GC 10), fencing of impact limits (LOP GC 11), avoidance of breeding season (LOP GC 12), and exotic species management (LOP GC 13). In addition to these general conditions, individual project review would result in appropriate site-specific conditions, where appropriate. Within the aquatic resource integrity areas, impacts in excess of 0.1 acre of permanent impact would not be authorized by LOPs, allowing the LOP procedures to develop more effective minimization measures for the allowable smaller impacts. Nevertheless, the individual project review with each application would allow for the final determination of all minimization measures.

Subpart H (40 CFR 230.75(d)) references compensatory mitigation to offset habitat impacts. The mitigation elements serve as minimization measures when associated with other permit actions. In the broader context, the mitigation elements allow for more successful achievement of compensatory mitigation by identifying appropriate locations for restoration and creation, and by incorporating a long-term framework that would allow for improved resource management.

### **3.0 PLANNING TO SHORTEN PERMIT PROCESSING TIME**

The Guidelines refer to methods to shorten permit processing times in 40 CFR 230.80. Although SAMPs are not referenced specifically, the section outlines a process, advanced identification of disposal areas (ADID) that is similar in concept to the process used for this SAMP. The ADID

process identifies non-sensitive areas, which generally would be suitable for the discharge of dredged or fill material, as well as areas that are unsuitable for the discharge of dredged or fill material. The ADID process is analogous to the SAMP, whereby for the SAMP Analytical Framework the Watershed's aquatic resources were assessed as being either lower integrity aquatic resources or high to moderate integrity (or otherwise important) aquatic resource integrity areas. A main distinction between the two processes is that the SAMP, unlike the ADID, includes detailed policies to implement the findings of the aquatic resource characterization in the form of specific permitting procedures and a comprehensive mitigation framework. Overall, the SAMP fulfills the objectives of an ADID.

#### **4.0 COMPENSATORY MITIGATION**

A proposed rule to better address compensatory mitigation for losses of aquatic resources was published in the Federal Register on March 28, 2006. These proposed rules would become part of the Guidelines, becoming Part J (40 CFR 230.91 through 230.99). These proposed rules were developed based on the decades of experience by the EPA and the Corps and in consideration of the scientific literature on the evaluation of compensatory mitigation sites. This proposed rule would expand the discussion of compensatory mitigation in section II.C.3 of the Memorandum of Agreement (MOA; 1980). Although the rule has not been finalized at this time of this SAMP and Program EIS/EIR publication, the SAMP considers the recommendations in the evaluation of compliance with the Guidelines.

A key feature of the SAMP policy on compensatory mitigation is the emphasis on the watershed approach to compensatory mitigation. Section 230.93(c)(1) of the proposed regulations indicate the Corps should undertake to require compensatory mitigation that is consistent with a watershed approach. The watershed approach is based on a watershed plan. As proposed (40 CFR 230.92), a watershed plan “*addresses ecological conditions in the watershed, multiple stakeholder interests, and land uses*” and “*may also identify priority sites for aquatic resource restoration and protection.*” The definition of a “watershed plan” includes a SAMP as an example. Section 230.93(c)(2) of the proposed regulations emphasizes the importance of landscape position in identifying compensatory mitigation sites. Consideration of landscape position allows for maximization of particular functions with considerations given to trends in losses, habitat requirements of impacted species, and upland open space. Locational factors such as hydrology and surrounding land use are emphasized to ensure impacted habitat functions and values are fully compensated. Although other functions such as water quality and flood control need to be considered, all functions should be considered in the context of the landscape.

The SAMP is the realization of watershed planning through coordination with local stakeholders and with applications to compensatory mitigation. Implementation of the SAMP for the Watershed involves identification of priority restoration sites, discussion of long-term

management, and discussion of opportunities for coordination of mitigation programs across different agencies. The SAMP would better address the requirements of compensatory mitigation of the Guidelines as compared with the conventional case-by-case permitting with mitigation.

## **5.0 CONSIDERATIONS OF THE RGP**

Section 230.7 of the Guidelines requires an additional analysis for establishing general permits, such as the RGP. A general permit must be similar in nature and their impact to the aquatic environment must have no more than minimal adverse impacts individually and cumulatively (40 CFR 230.7(a)). The evaluation of the RGP involves considerations of the prohibitions in sections 230.10(b) and considerations of 230.10(c), the environmental impacts based on subparts C-F, and the likely cumulative impacts expected until its expiration five years hence.

The RGP for maintenance activities for the Watershed involves only similar activities. The activities would involve maintenance within waters of the U.S. These activities may not temporarily impact more than 0.5 acre of waters of the U.S., including not more than 0.1 acre of temporary impacts to native wetland and riparian vegetation, within low quality aquatic resource areas. Due to the explicit allowance of temporary impacts associated with maintenance, the RGP involves similar activities with similar level of impacts to the aquatic environment.

The RGP would involve minimal impacts temporarily and cumulatively. Each individual action would be temporary and would be confined to a small area less than 0.5 acre, of which no more than 0.1 acre may be vegetated by native wetland and riparian plants. In addition, the RGP may be used only in poor quality or less sensitive aquatic resources outside of aquatic resource integrity areas. In light of the temporary impacts to a small degraded aquatic area, the RGP would authorize minimal impacts individually. Because the cumulative impacts from all such actions would not result in permanent impacts and would be in poor quality aquatic resources, there would be no permanent loss of waters of the U.S. The RGP would authorize minimal impacts cumulatively.

Sections 2.2 and 2.3 of this Appendix evaluated the RGP with respect to the prohibitions and significant degradation, and minimization, respectively. Due to the temporary nature of the impacts, limited extent, location of the authorized impacts in lower quality aquatic resource areas, and the RGP general conditions, the RGP does not violate any prohibitions and does not result in significant degradation.

In predicting the cumulative impacts from this RGP, the number of section 404 permit verification letters were calculated from 2000 to 2007. Also, the instances when the activity would have proceeded without notification to the Corps were considered. Thus, for a seven-year period, it is estimated that this RGP would be used about 20 times. Thus, permanent cumulative impacts would not be expected to occur.

## 6.0 SUMMARY AND CONCLUSIONS

The findings of the SAMP's compliance or non-compliance with the restrictions on discharge on the basis of the Guidelines (40 CFR 230.12) will be made at the time the Record of Decision is prepared. As discussed above, future projects either already comply with the Guidelines (i.e., RGPs) or must demonstrate site-specific compliance with the Guidelines (i.e., LOPs) at the time of permit evaluation. Below is a summary of the compliance necessary for the three types of permit authorization processes in the Watershed:

- RGP- Fully complies with Guidelines, initially and subsequently.
- LOP- Programmatic compliance initially/subsequent specific-project compliance (Table E-1).
- SIP- No programmatic compliance/subsequent specific-project compliance (with full analysis and tiered from the Program EIS/EIR where appropriate).

Table E-1 shows the relationship between the proposed LOP procedures and compliance with the Guidelines. Program Level refers to the SAMP and its Program EIS/EIR. Site-specific Level refers to LOP authorizations requested by future project proponents.

<b>Table E-1</b>		
<b>Relationship between Proposed LOP Procedures and Compliance with the Guidelines</b>		
<b>Section of Guidelines</b>	<b>LOP Procedures - Program Level Compliance</b>	<b>LOP- Site-specific Level Compliance</b>
<b>Subpart B</b>		
230.10(a)- Alternatives and LEDPA	SAMP; alternatives analysis not required; minor impacts for similar impacts; permit conditions	Alternatives analysis may be needed; verify compliance with evaluation of permit application.
230.10(b)- Four factors	Program EIS/EIR analysis of permit processing procedures (including interagency coordination), permit conditions, and mitigation program	Tier from Program EIS/EIR, site-specific review, and add any site-specific conditions at time of evaluation of permit application.
230.10(c)- Significant degradation	Program EIS/EIR analysis of permit processing procedures (including interagency coordination), permit conditions, and mitigation program	Tier from Program EIS/EIR, site-specific review, and add any site-specific conditions at time of evaluation of permit application.
230.10(d)- Minimization measures	Program EIS/EIR analysis of permit processing procedures (including interagency coordination), permit conditions, and mitigation program. Relate to subpart H.	Tier from Program EIS/EIR, site-specific review, and add any site-specific conditions at time of evaluation of permit application.
230.11(a – h) – Factual determinations	Program EIS/EIR analysis of permit processing procedures (including interagency coordination), permit conditions, and mitigation program	Tier from Program EIS/EIR, site-specific review, and add any site-specific conditions at time of evaluation of permit application.
230.12- Overall compliance with Guidelines	Program EIS/EIR analysis of permit processing procedures (including interagency coordination), permit conditions, and mitigation program. Relate to subpart H.	Tier from Program EIS/EIR, verify compliance, and add any site-specific conditions at time of evaluation of permit application.
<b>Subpart J (proposed March 28, 2006)</b>		
230.93 - 97	SAMP mitigation framework	Verify compliance with SAMP